

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended): A method of describing pattern repetitiveness of an image comprising the steps of:

- (a) projecting an image on a predetermined axis having a predetermined direction;
- (b) decomposing the projected image down one level;
- (c) increasing a ~~denoising-threshold~~ value used for denoising if a pattern quantizing value is retained, and denoising the decomposed data; and
- (d) describing pattern repetitiveness of the image using the pattern quantizing value of the denoised data and the ~~denoising-threshold~~ value used for denoising.

2. (Original): The method of claim 1, wherein the decomposition is based on a discrete wavelet transform.

3. (Currently Amended): The method of claim 1, wherein step (c) comprises the steps of:

- (c-1) calculating the pattern quantizing value of the projected image;
- (c-2) decomposing the projected image down one level;
- (c-3) denoising the decomposed result data using a predetermined threshold value;
- (c-4) calculating the pattern quantizing value of the denoised data;

(c-5) discriminating whether a current pattern quantizing value is identical to a previous pattern quantizing value;

(c-6) increasing the ~~denoising-threshold~~ value used for denoising if the current pattern quantizing value is identical to the previous pattern quantizing value, and returning to step (c-3); and

(c-7) determining the previous pattern quantizing value as a final pattern quantizing value if the current pattern quantizing value is not identical to the previous pattern quantizing value.

4. (Currently Amended): The method of claim 3, wherein step (d) comprises:

(d') describing the pattern repetitiveness of the image on the basis of the pattern quantizing value determined in the step (c-7) and the ~~denoising-threshold~~ value used for denoising.

5. (Currently Amended): A pattern repetitiveness describing method of an image comprising the steps of:

(a) projecting an image on a predetermined axis having a predetermined direction;

(b) decomposing the image if the level at which a previous pattern quantizing value and a pattern quantizing value after the decomposition are retained as they are, and denoising; and

(c) describing the pattern repetitiveness of the image using one of the pattern quantizing value of the data from which at least level number and noise are removed, and a ~~denoising~~ threshold value used for denoising.

6. (Original): The method of claim 5, wherein the decomposition is based on a discrete wavelet transform.

7. (Original): The method of claim 5, wherein step (b) comprises the steps of:

(b-1) calculating the pattern quantizing value of the projected image;

(b-2) decomposing the projected image down one level;

(b-3) calculating the quantizing value of the decomposed result data;

(b-4) determining whether the previous pattern quantizing value is identical to the pattern quantizing value after the decomposition;

(b-5) if the previous pattern quantizing value is identical to the pattern quantizing value after the decomposition, returning to step (b-2); and

(b-6) if the previous pattern quantizing value is not identical to the pattern quantizing value after the decomposition, determining a previous level as a final level.

8. (Currently Amended): The method of claim 7, wherein the pattern repetitiveness describing method of the image further comprises the steps of:

(b-7) denoising data of the level determined in the step (b-6) using a predetermined threshold value;

(b-8) calculating the pattern quantizing value of the denoised data;

(b-9) determining whether the current pattern quantizing value is identical to the previous pattern quantizing value;

(b-10) if the current pattern quantizing value is identical to the previous pattern quantizing value, increasing the denoising-threshold value used for denoising, and returning to step (b-7); and

(b-11) if the current pattern quantizing value is not identical to the previous pattern quantizing value, determining the previous pattern quantizing value as a final pattern quantizing value.

9. (Currently Amended): A method of grouping images having similar texture characteristics within an image database in which a plurality of images are stored, the method comprising the steps of:

- (a) projecting an image on a predetermined axis having a predetermined direction;
- (b) decomposing the projected image down one level;
- (c) increasing a ~~denoising~~-threshold value used for denoising if a pattern quantizing value is retained, and denoising the decomposed data;
- (d) determining pattern repetitiveness vectors including the pattern quantizing value of the denoised data and the ~~denoising~~-threshold value used for denoising as pattern repetitiveness descriptors of images; and
- (e) grouping images having similar texture characteristics using the pattern repetitiveness descriptors of the images.

10. (Currently Amended): A method of grouping images having similar texture characteristics within an image database in which a plurality of images are stored, the method comprising the steps of:

- (a) projecting an image on a predetermined axis having a predetermined direction;
- (b) decomposing the image if the level at which a previous pattern quantizing value and a pattern quantizing value after the decomposition are retained as they are, and denoising;

(c) determining a level number of the denoised data, a pattern quantizing value, and a denoising-threshold value used for denoising as pattern repetitiveness descriptors of the image; and

(e) grouping images having similar texture features using the pattern repetitiveness descriptors of the images.

11. (Previously Presented): The method of claim 1, wherein the step (c) comprises increasing the threshold value until the pattern quantizing value changes.

12. (New): The method of claim 1, wherein the step (c) comprises increasing the threshold value used for denoising if a current pattern quantizing value is identical to a previous pattern quantizing value.

13. (New): The method of claim 1, wherein the step (c) comprises:
denoising the decomposed result data using a predetermined threshold value;
calculating a current pattern quantizing value of the denoised data;
increasing the threshold value used for denoising if the current pattern quantizing value is identical to a previous pattern quantizing value.